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The Myth of Oregon's "Freight Dependent" Economy

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The Myth of a Freight-Dependent Economy

Joe Cortright
April 2016

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Last week, City Observatory celebrated its first birthday. This week, we're taking some time to look back at all the reports and commentaries we researched and wrote in the last year, and picking...



By Daniel Hertz | 20.10.2015

The Week Observed: October 23, 2015

Beyond gas: The price (of driving) is wrong

Why creating meaningful transportation change is so hard

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Twitter

Catch up on the week's urban news with The Week

Observed: <http://cityobservatory.org/the-week-observed-october-23-2015/> ... pic.twitter.com/tkeerNsgtx

in 6 hours

Less in Common

The essence of cities is bringing people—from all walks of life—together in one place. Social interaction and a ...

Joe Cortright | 9.6.2015

What Matters to the Success of Cities

Economic
Opportunity

Talent & Prosperity

Talent drives city success: The biggest

Development
Strategies

Surging City Center
Job Growth

Synopsis

- **What drives our economy?**
- **Freight facts**
- **Containers: A case study**
- **What about just-in-time?**
- **A cluster case-study**
- **Academic evidence**

Freight dependent



Widmer in Italy

Why?

Great Beer.

Not Transportation Prowess.



Backwards Logic

**We export things because
we're good at making them**

**We don't make things
because we're good at
exporting them**

We're dependent on a lot of things:

- **Caffeine Dependent**
- **Electricity Dependent**
- **Oxygen Dependent**
- **Water Dependent**
- **Internet Dependent**

Freight Facts

Fact 1:
**Most freight is heavy,
low-value and local**

Growing, High value industries ship trivial amounts of freight

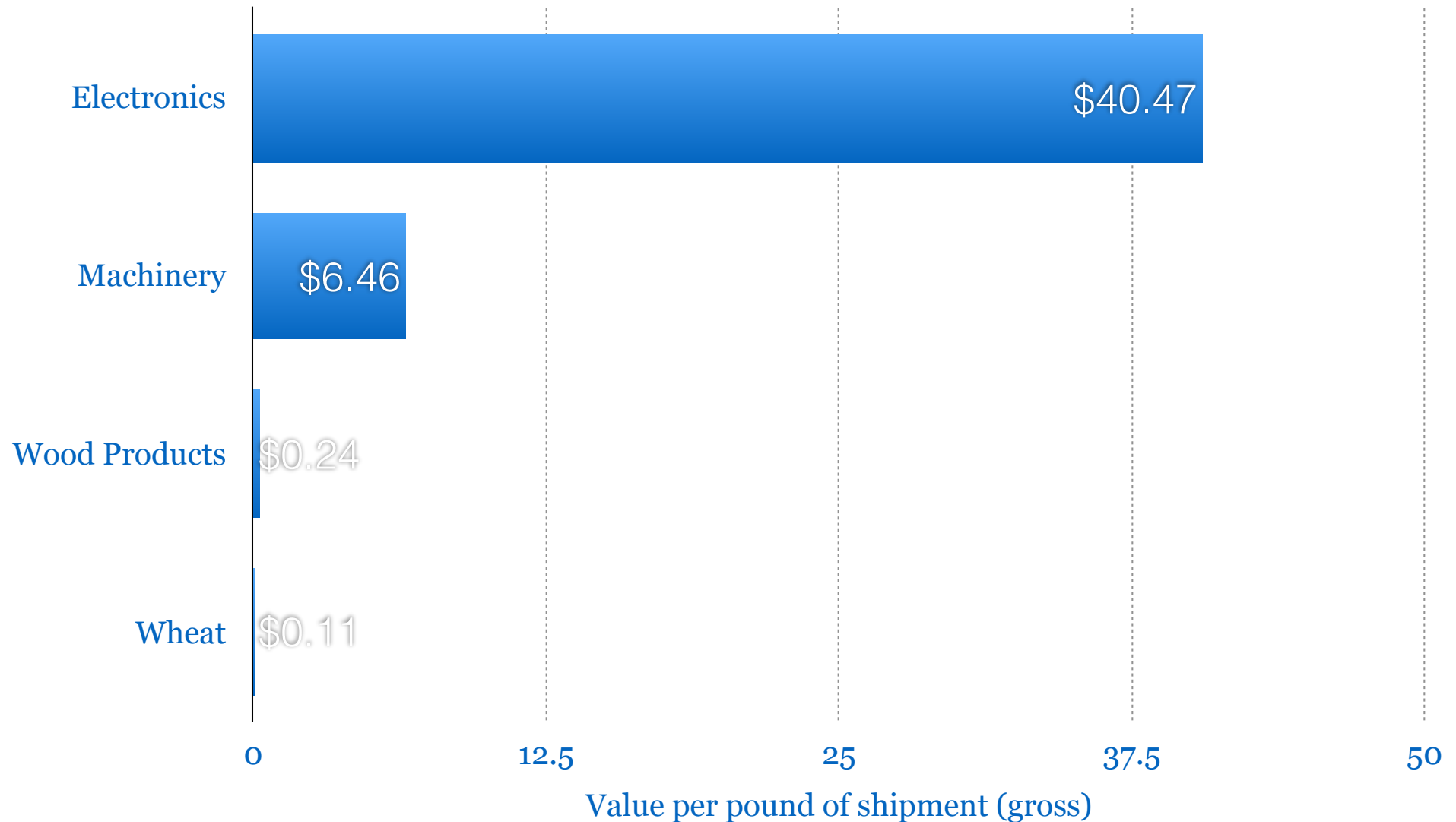
<u>Industry</u>	<u>Pounds/Worker/Day</u>
Minerals	10,000
Wood/Paper	7,348
Food Processing	3,794
Metals	2,243
Apparel	554
Machinery	510
Electronics	50
Software/Prof. Svcs.	0

Source: 2002 Commodity Flow Survey for Portland-Vancouver

Most freight is low value bulk

<u>Commodity</u>	<u>Share of Freight</u>
Gravel & Stone	32.8%
Wood Products	17.4%
Non-Metallic Minerals	11.5%
<u>Coal & Oil Products</u>	<u>5.6%</u>
Total, these bulks	67.3%

High value, low weight



Source: 2012 Commodity Flow Survey, US Census

Most freight is purely local

Portland-Area Freight Movements by Destination, Origin & Distance Traveled

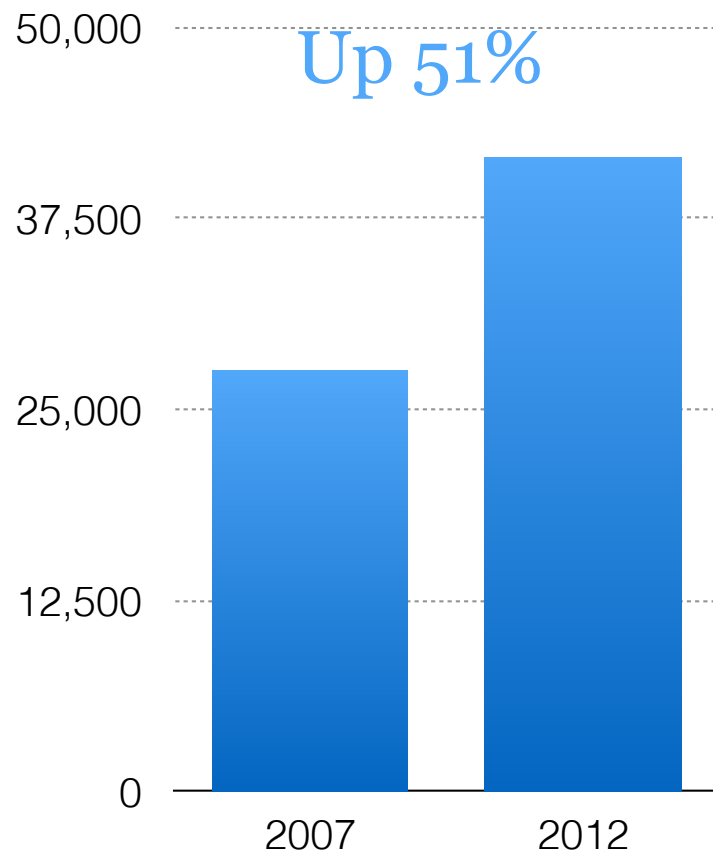
Destination of Outbound Shipments:	Oregon - 73.6%
Origin of Inbound Shipments:	Oregon - 62.1%
Shipments Traveling less than 50 miles:	67.5%

Source: 2002 Commodity Flow Survey for Portland-Vancouver, US Census

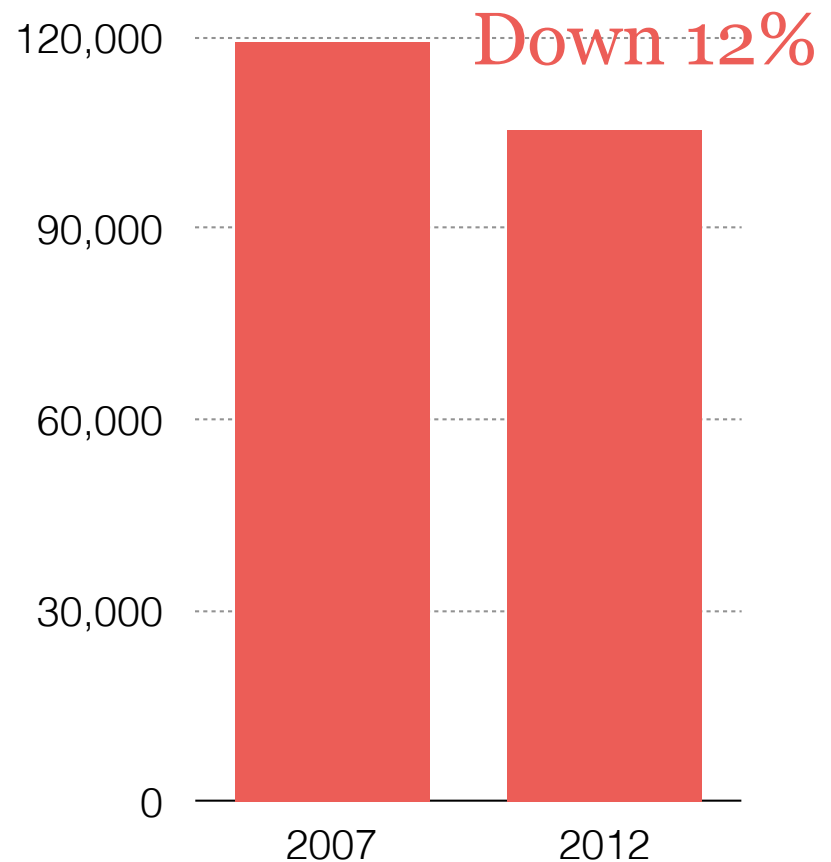
Fact 2:
Oregon's economy has shifted to lighter, high value products, and tonnage is down sharply

Electronics & machinery drive Oregon economy

Electronics & Machinery



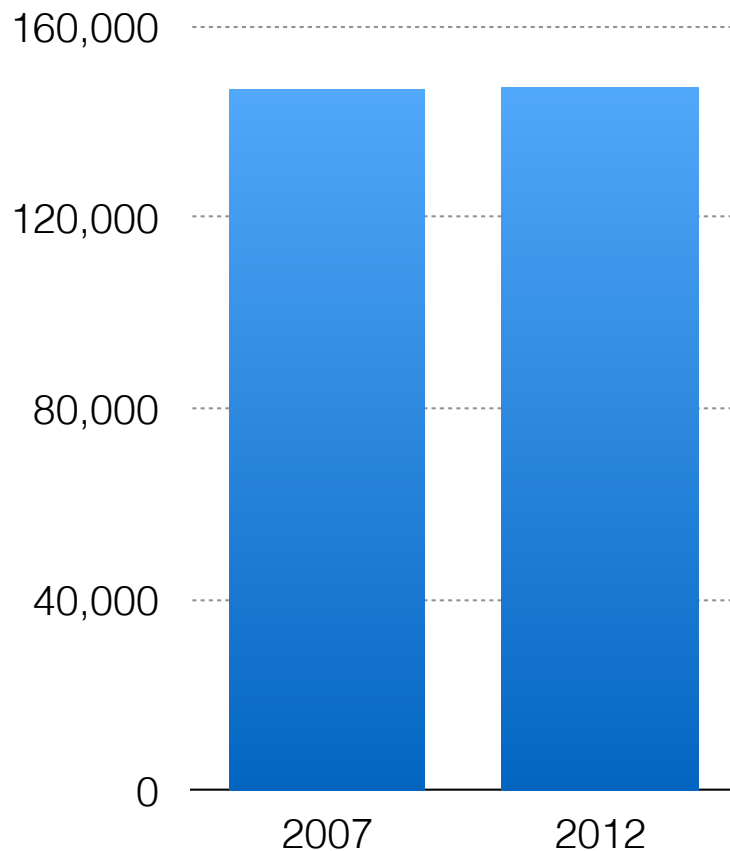
Everything Else



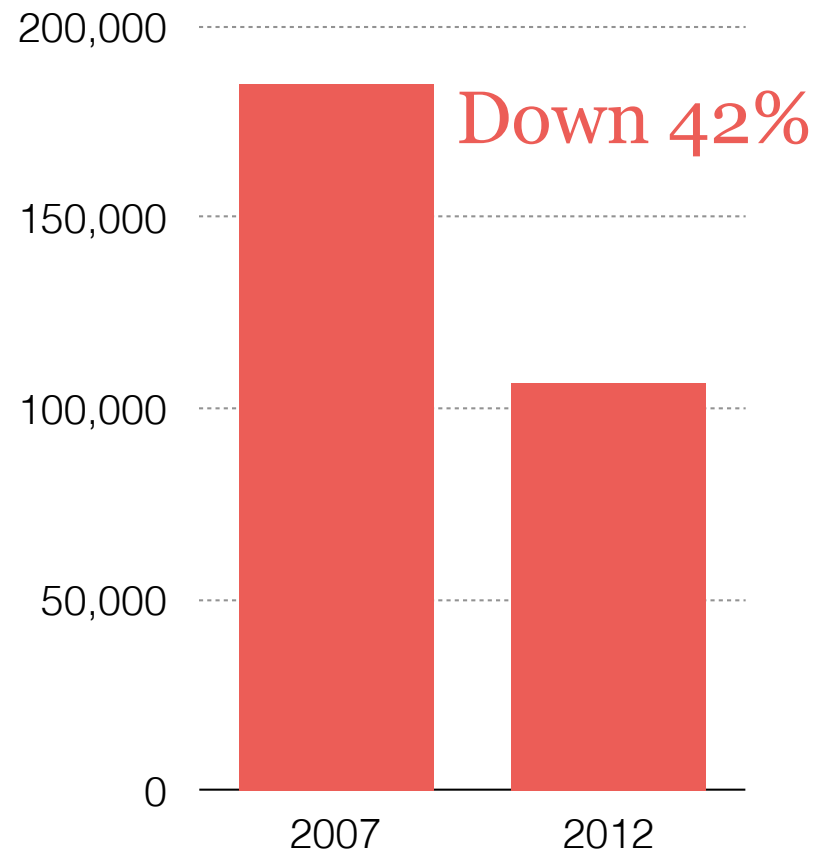
Value, Millions. Source: 2012 Commodity Flow Survey, US Census

Creating just as much value moving 42% fewer tons

Value (Millions)



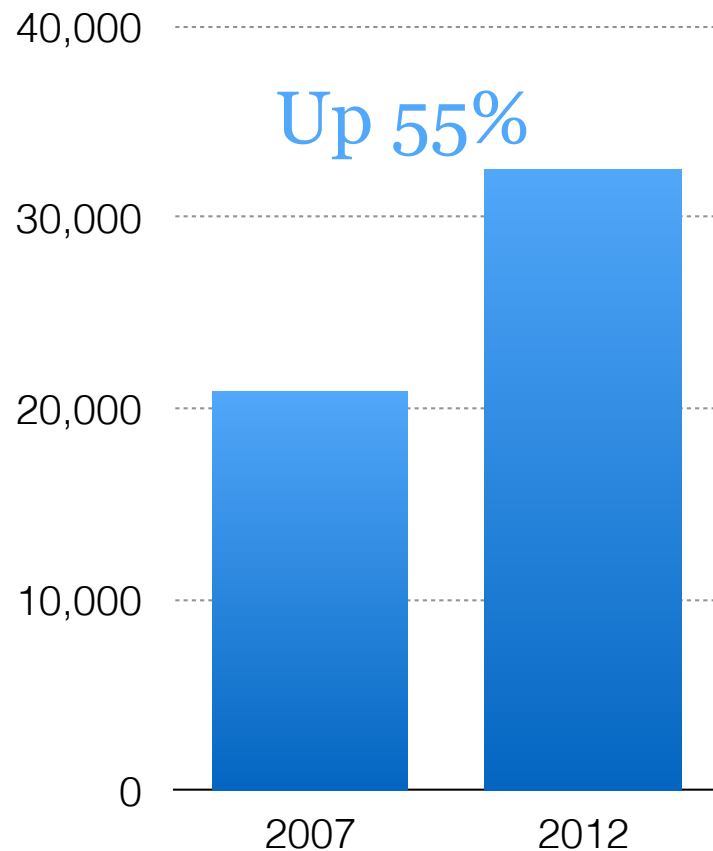
Tons (Thousands)



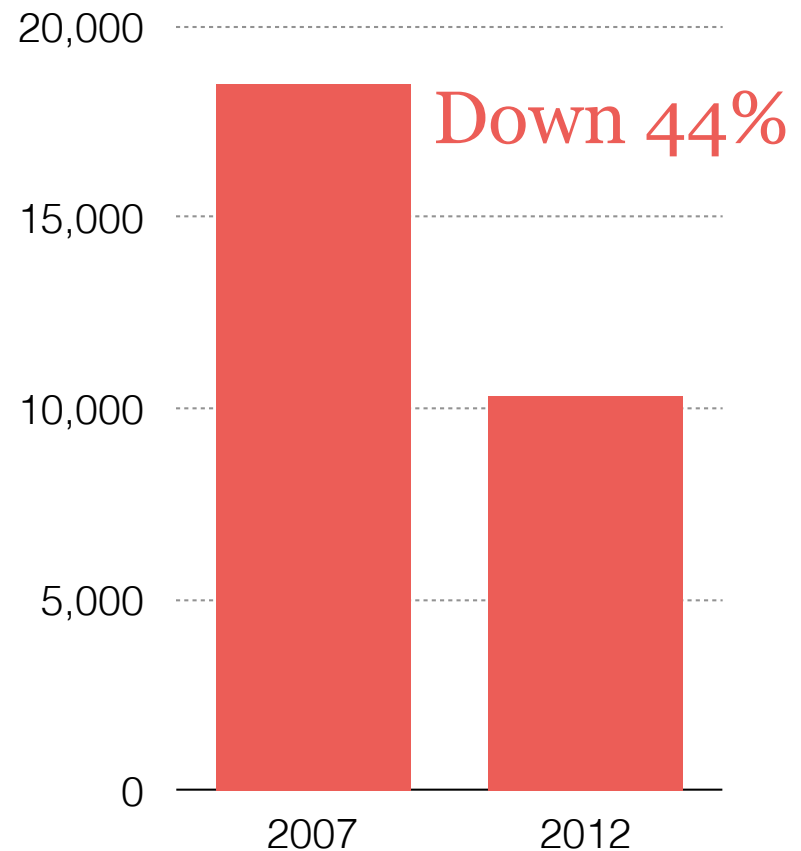
Source: 2012 Commodity Flow Survey, US Census

Oregon exports: Value up; tonnage down

Value (Millions)

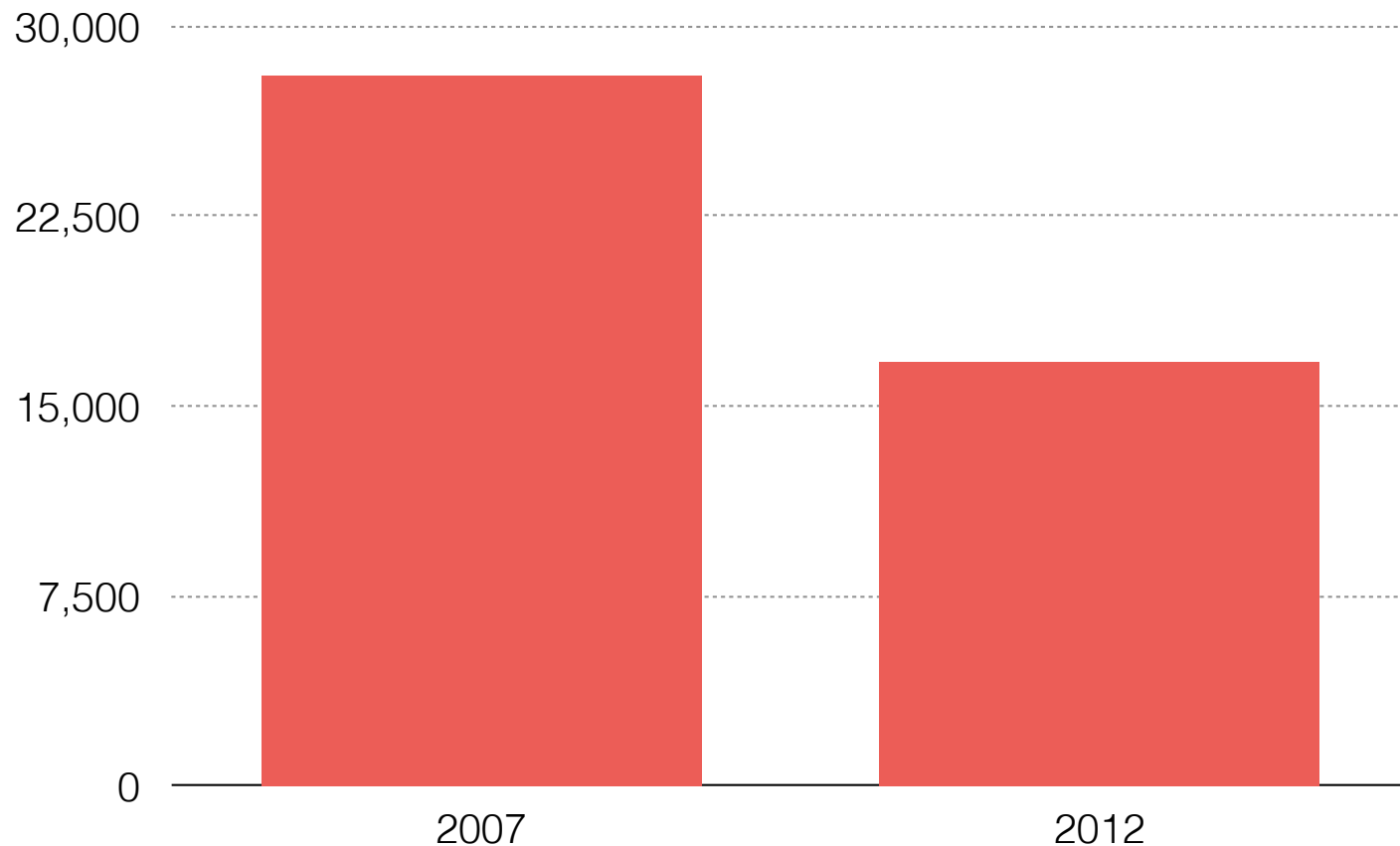


Tons (Thousands)



Source: 2012 Commodity Flow Survey, US Census

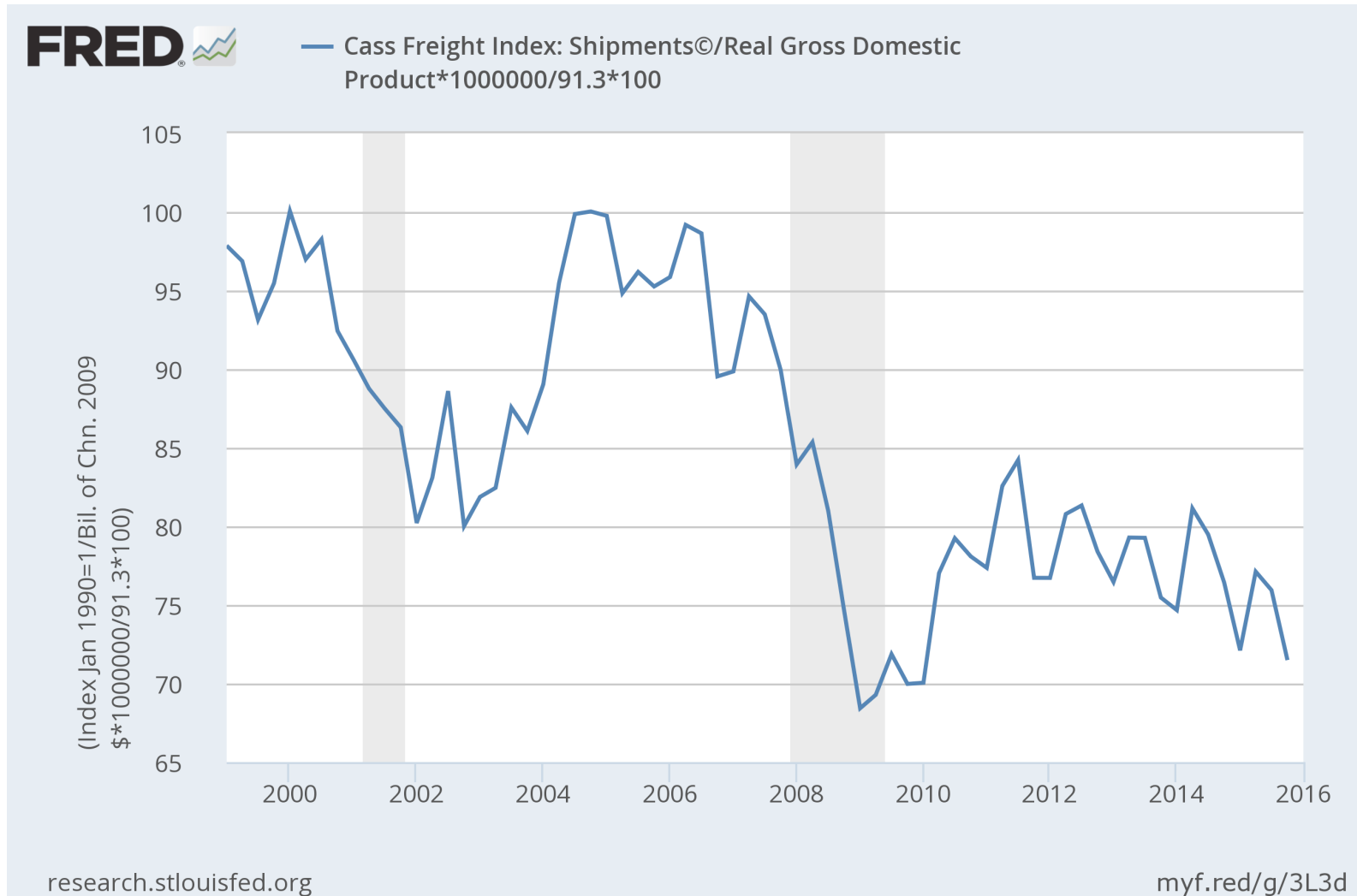
Oregon: Trucking ton miles down 40%



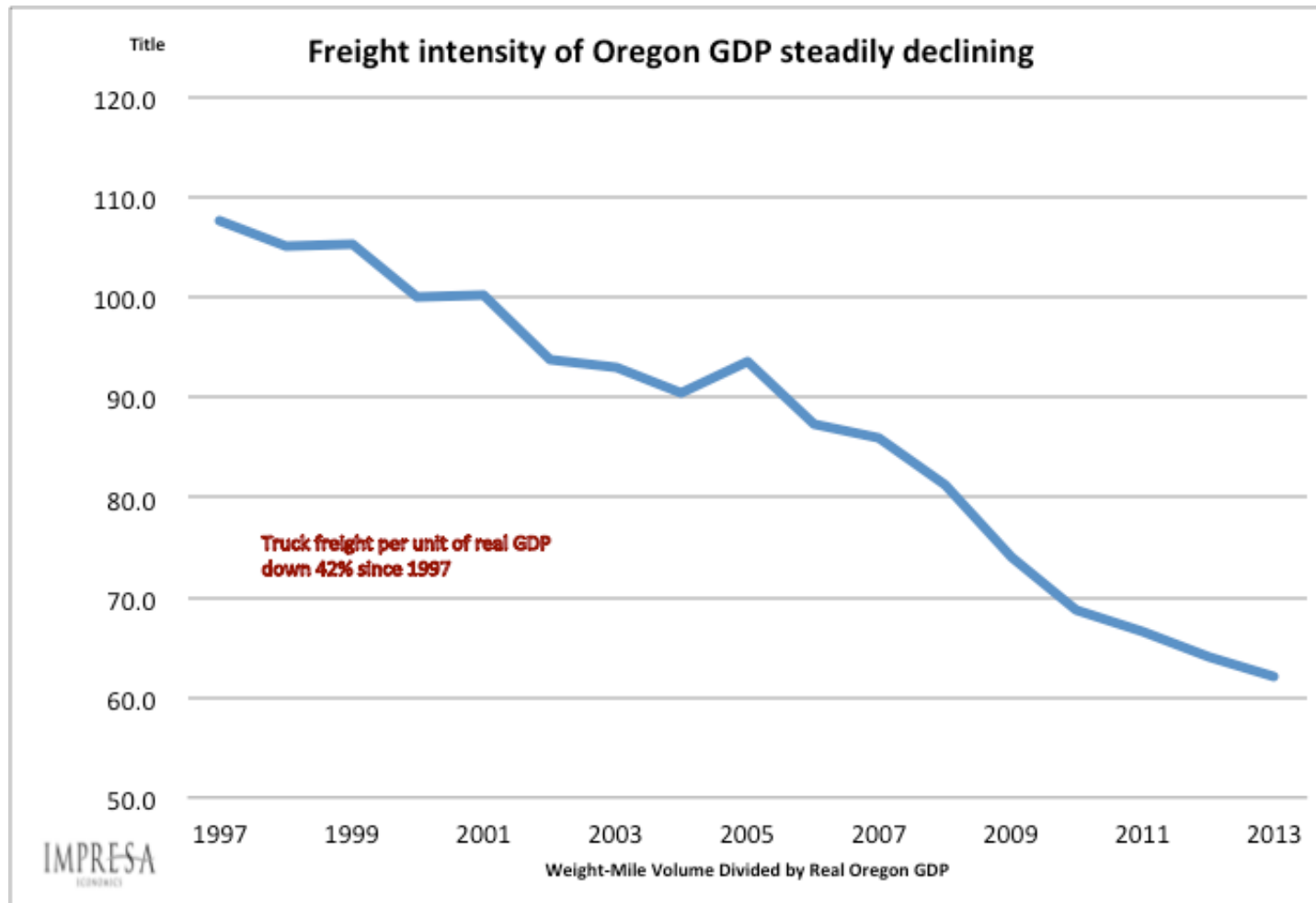
Source: 2012 Commodity Flow Survey, US Census

**Fact 3:
The economy is up;
freight is down.**

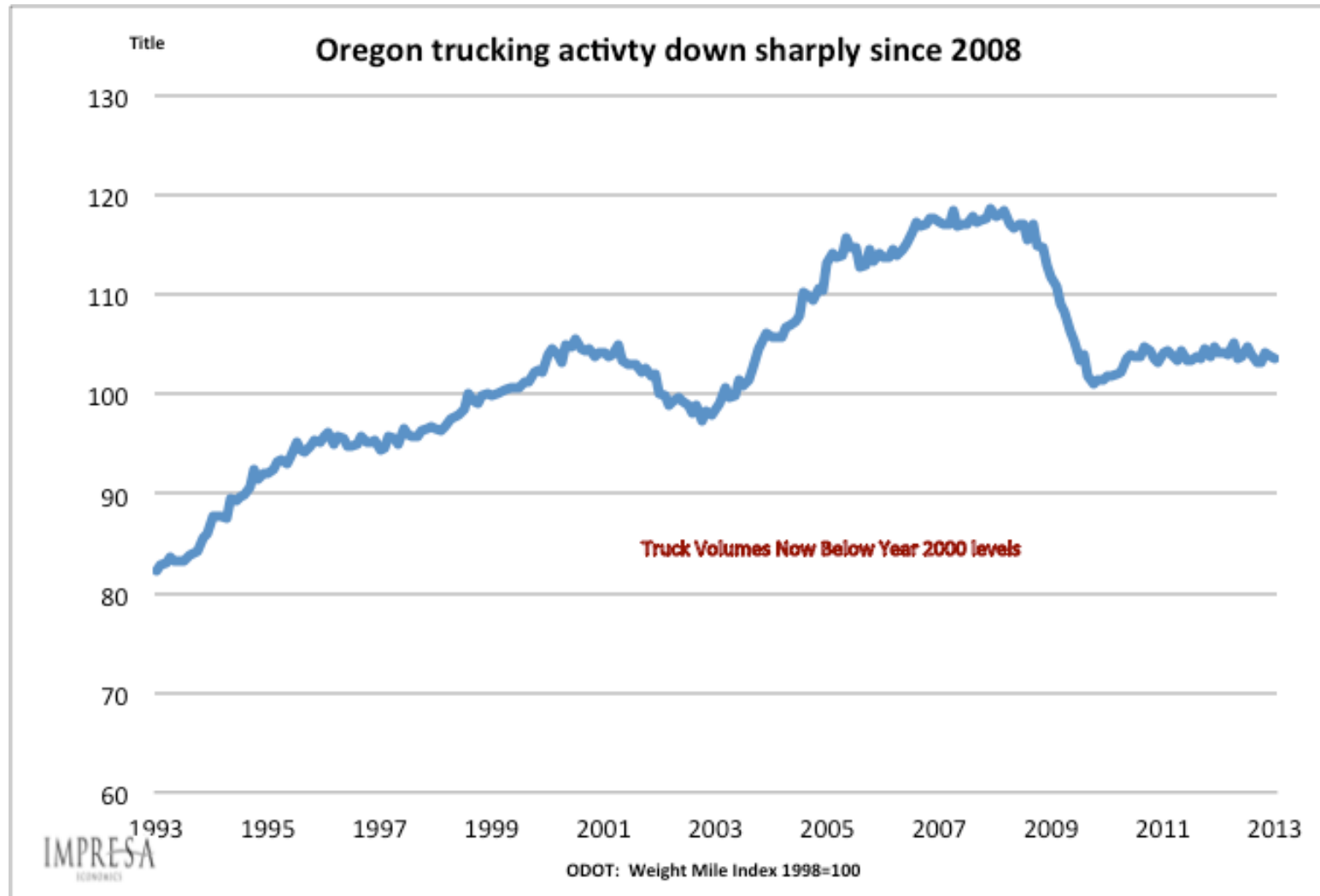
National: Freight intensity of GDP down



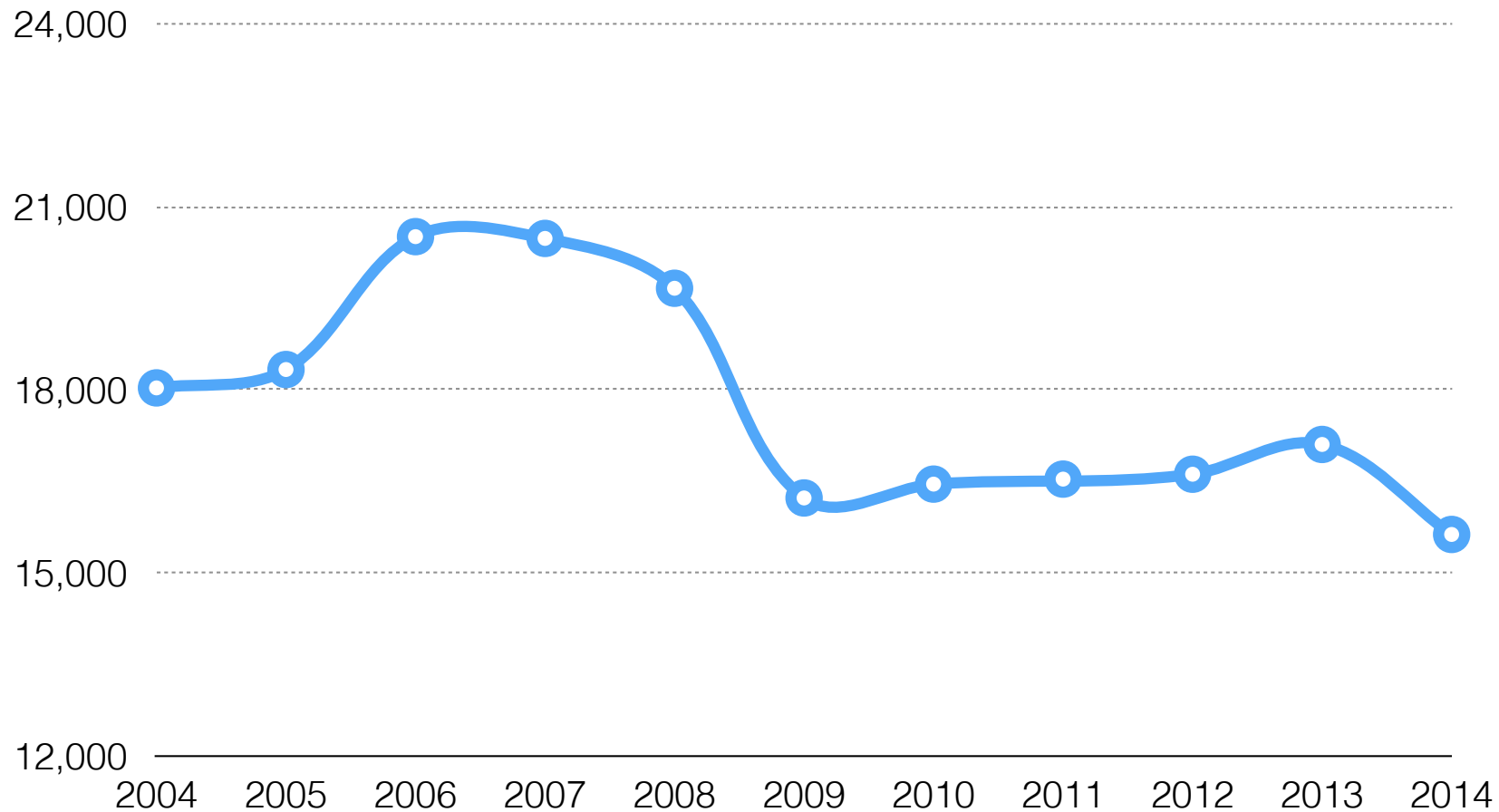
Oregon: Freight intensity down 40%



Oregon Truck traffic still below year 2000 levels



Trucks crossing Columbia down 20%



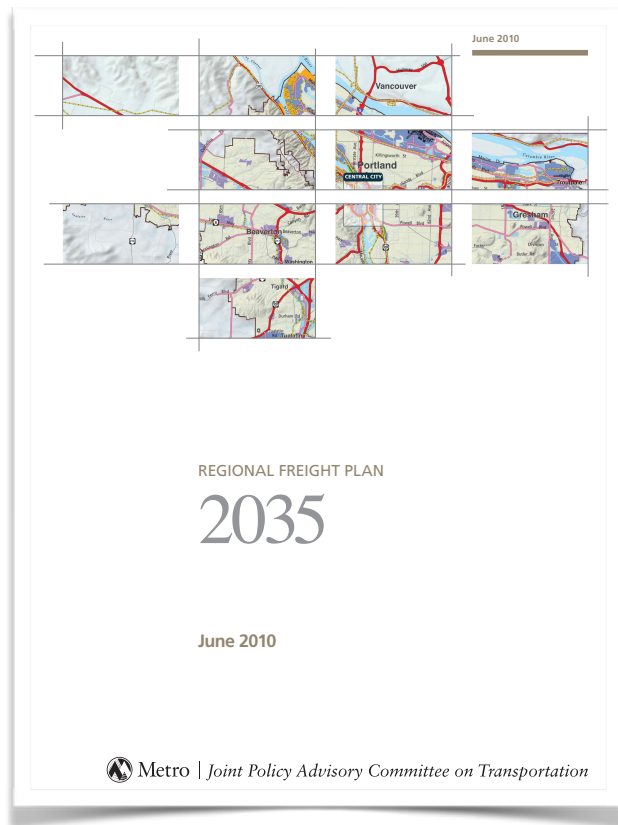
Source: ODOT, Class 6 and higher trucks crossing I-5 and I-205, AADT

Flawed Freight Plans

2010 Metro Regional Freight Plan

Trade volumes in Portland are expected to double by 2035, to 600 million tons annually.

The region's goods movement system will need to absorb a doubling of freight volumes by 2035, with approximately 75 percent of that dependent on trucks . . .



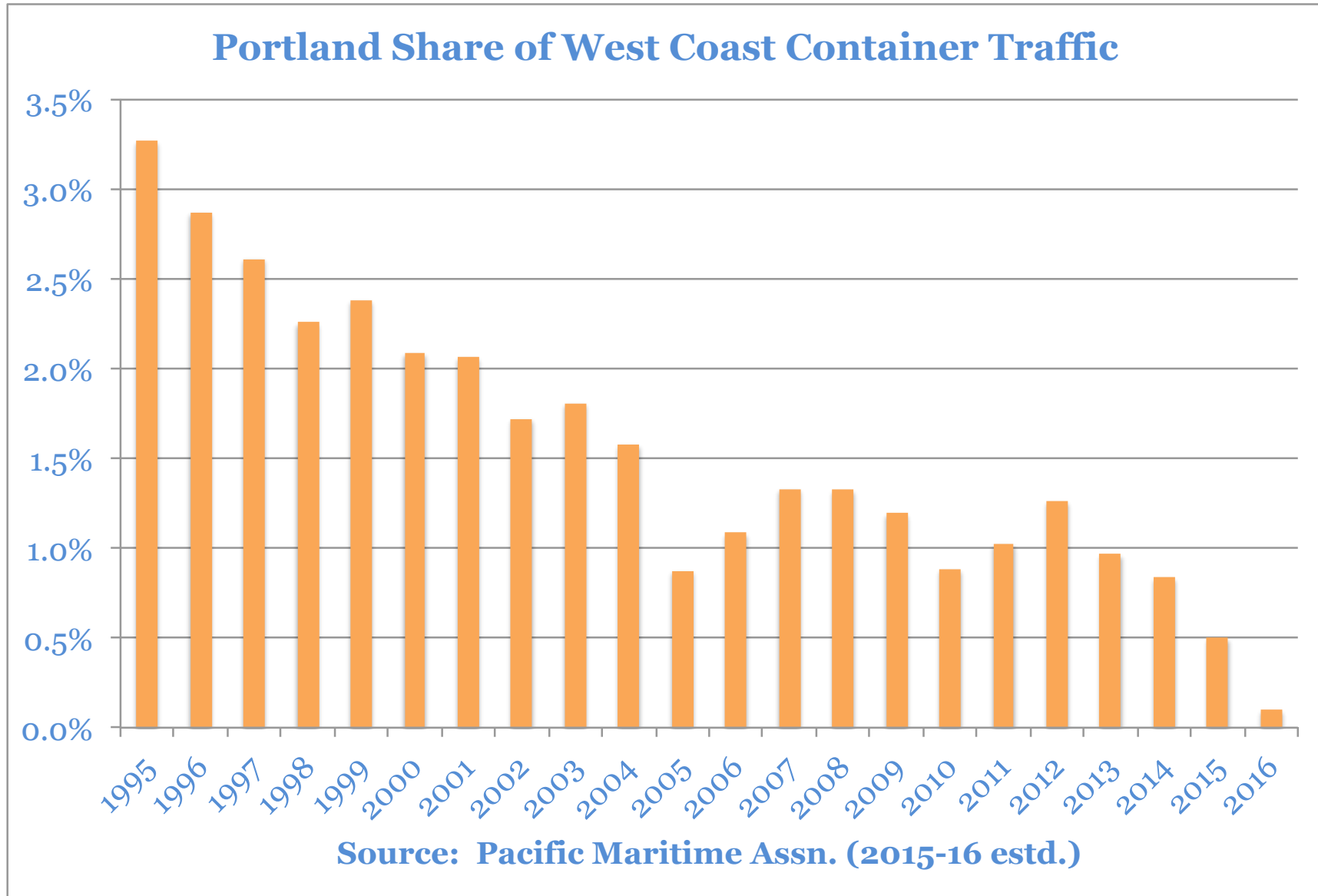
Containers: Case Study

Feb. 2015: Hanjin leaves

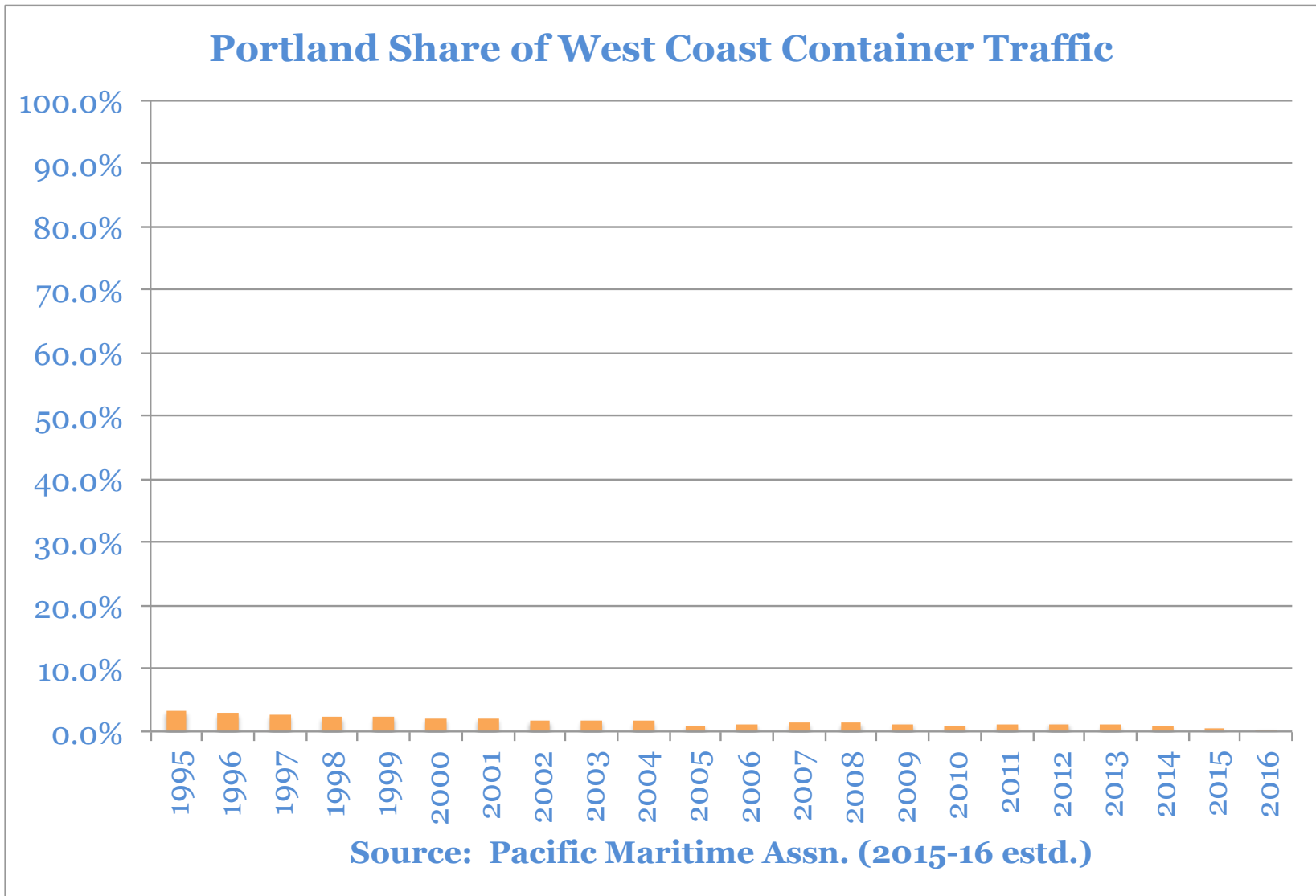


Apr. 2015: Hapag-Lloyd leaves

Portland's Decline

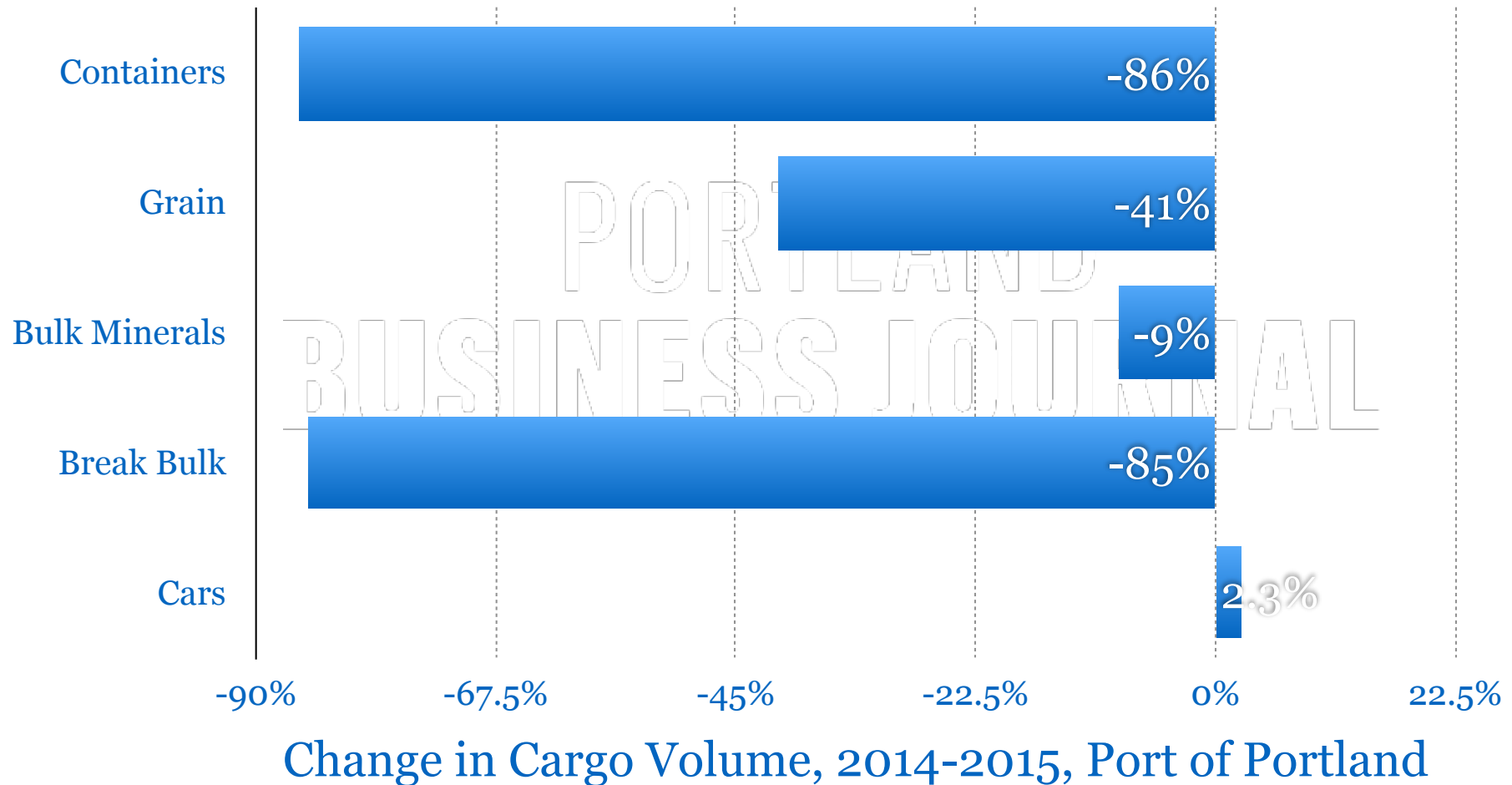


Always a bit player



Port in decline

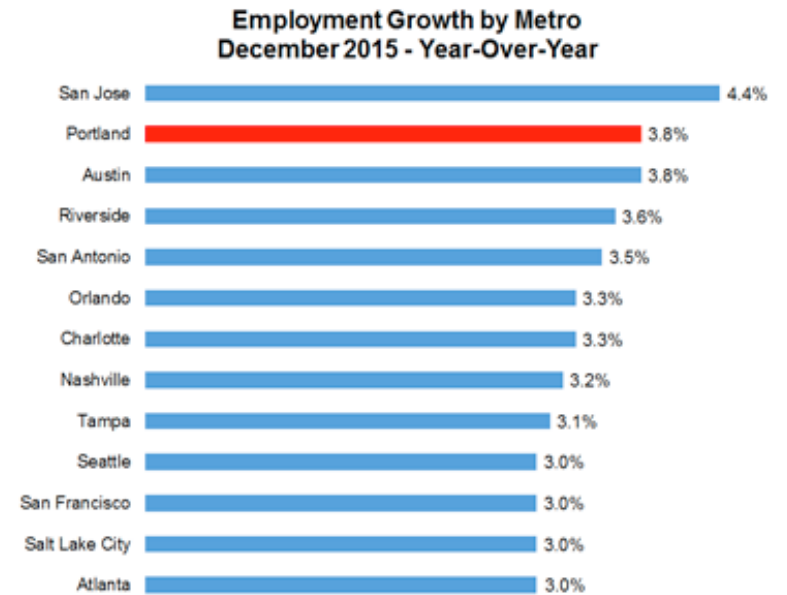
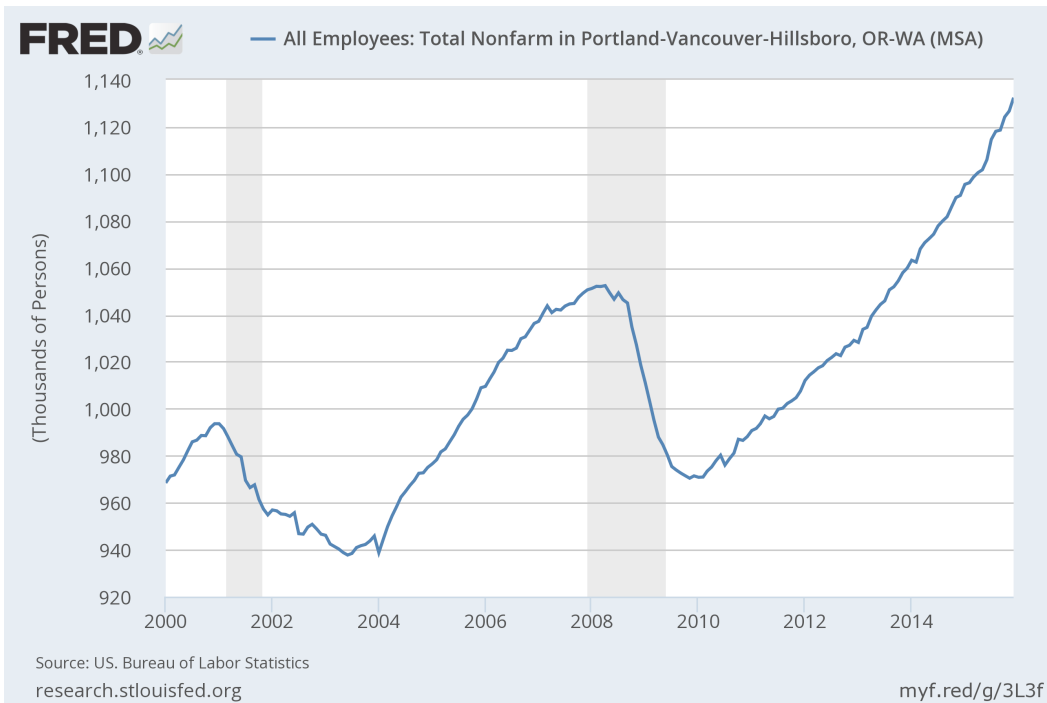
Portland *Business Journal*, Feb. 2016: “The port's other businesses are also struggling mightily.”



After Hanjin left

- **Portland job growth accelerated from 3.2 percent to 3.8 percent**
- **Portland metro area added 38,000 jobs**
- **Unemployment dropped to 4.4%—the lowest level in 15 years**
- **Change: February to December 2015, compared to previous year.**

Portland: 2nd fastest growing metro in 2015



Oregon Employment Department

High Tech on Hanjin

While the imminent **departure of Hanjin** Shipping Co. puts a severe dent in the Port of Portland's containerized trade, it **won't affect companies that ship some of the state's most valuable products**. Semiconductors, computer equipment, medical devices and other high-value items **move primarily by air** these days.

"At a high level, **will it really affect us? No,**" said Jason Willey, investor relations director at Hillsboro's FEI Corp.

The company **doesn't expect a customer to wait three or four weeks** for a focused ion-beam system to cross the ocean and clear customs.

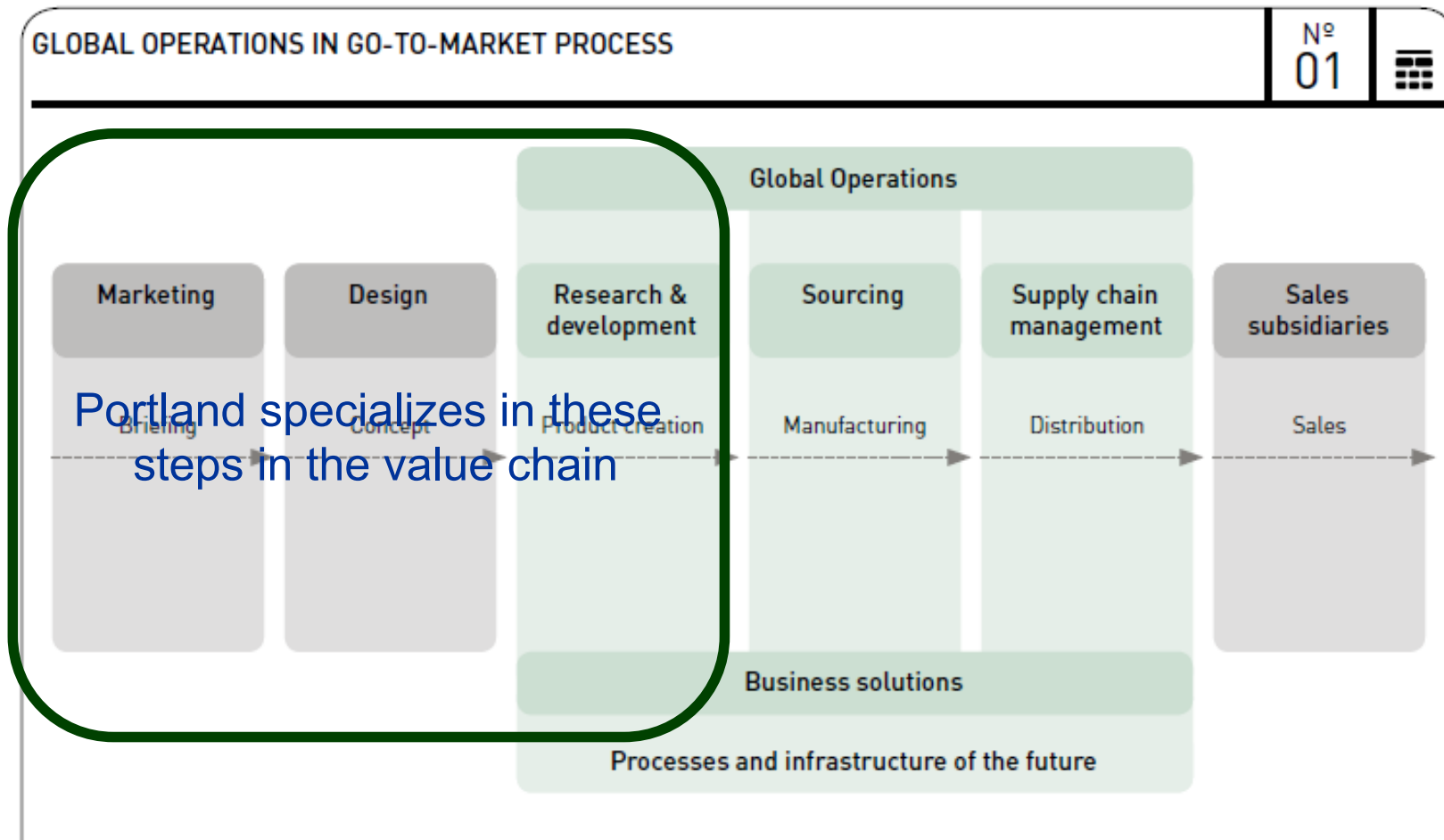
The port says the **most valuable things** that come to or go from Portland **by sea** are **autos** and agricultural products, from **wheat** to **logs**. But highly engineered computer product and other technical equipment flies in and out of the region's airports.

Athletic & Outdoor Cluster

Athletic & Outdoor

- **14,000 Jobs**
- **Hundreds of firms**
- **Very high wages**
- **Global leadership**
- **Fast-growing**

Athletics & Outdoor Specializations



A&O Supply Chain



Portland: High End of the Global Value Chain

<u>Activity</u>	<u>Location</u>	<u>Avg. Pay</u>
Production	China	\$2 to \$3/hour
Distribution	Midwest	\$12-14/hour
Design, Finance		
Marketing, Mgt.	Portland	\$40/hour

Academic Evidence

Does Freight Matter

The 90% reduction in freight transportation costs in the past century, and the declining importance of the good-producing sector of the economy, means that in our view, it is **better to assume that moving goods is essentially costless** than to assume that moving goods is an important component of the production process.”

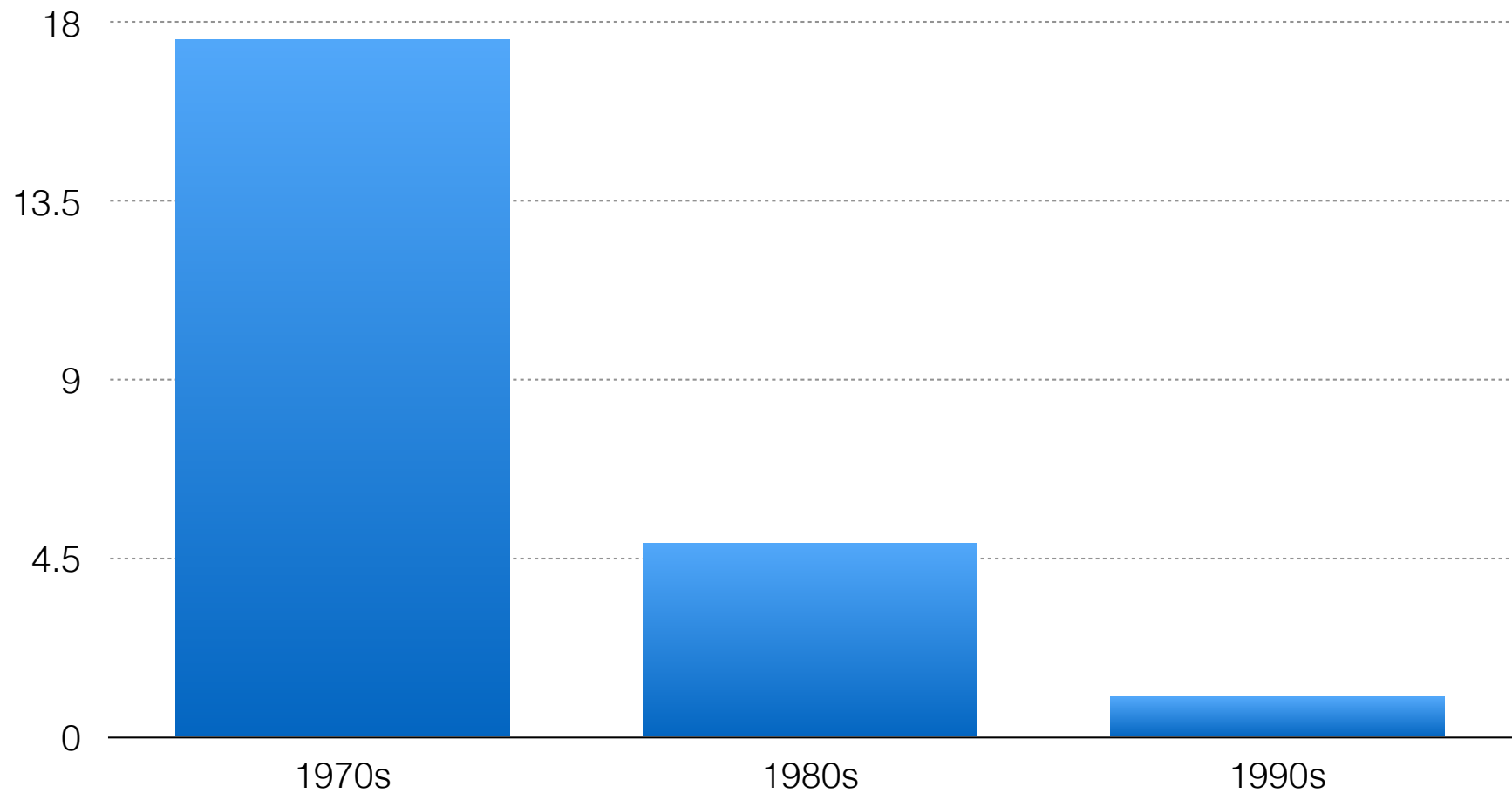
Ed Glaeser, Harvard, July 2003

“Cities, Regions and the Decline of Transport Costs”

Diminishing Returns

- **Highway Investment has strong diminishing returns**
- **Building the first roads has a big impact; later roads have successively smaller impact**
- **New roads today have almost no impact**

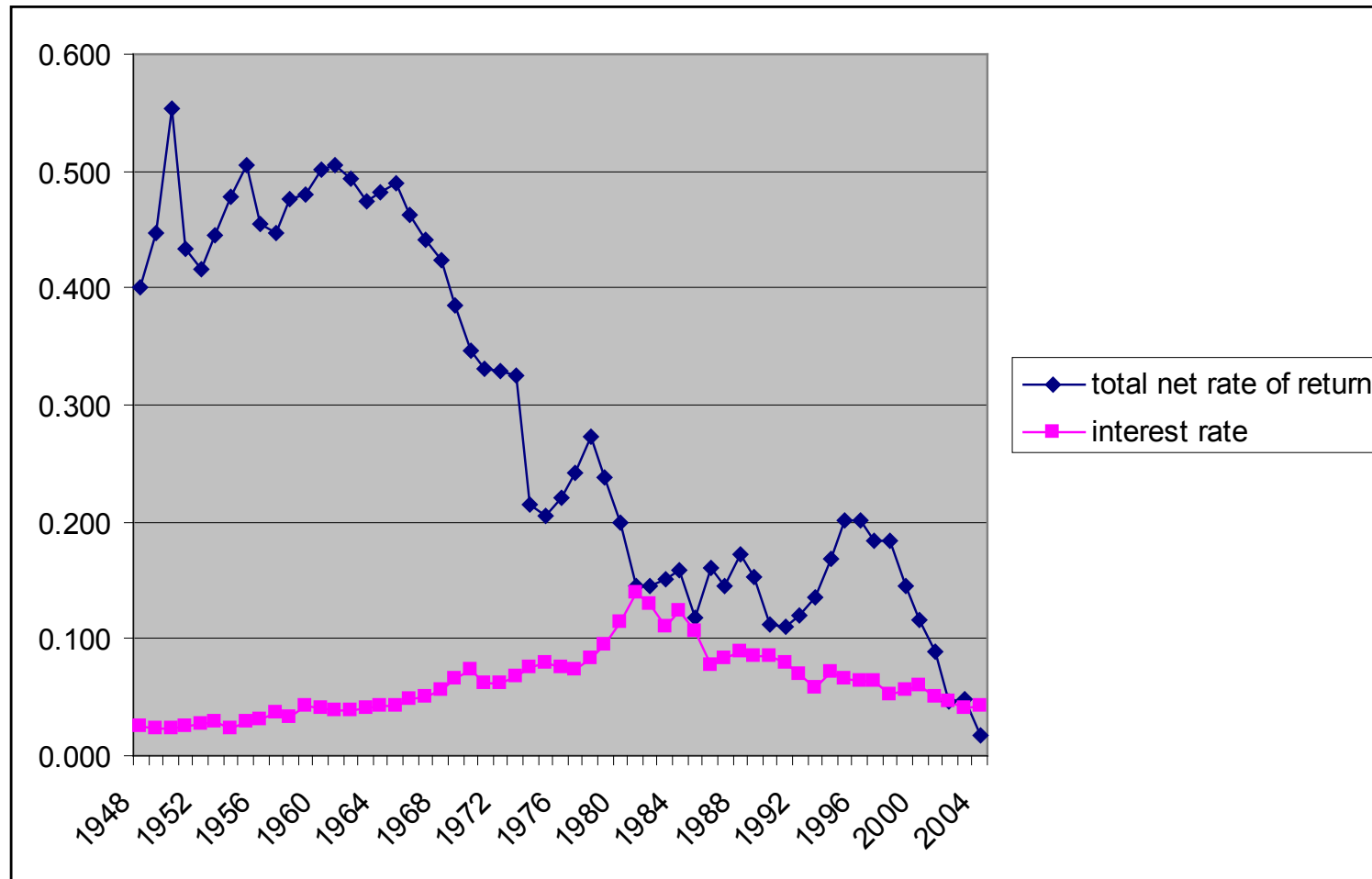
Shirley & Winston, 2004



Rate of return on highway investments, by decade

Eberts, 2014

Figure 6. Net Rate of Return of Highways and Interest Rates



Source: Author's calculations of Mamuneas's data.

Randall Eberts, *White Paper on Valuing Transportation Infrastructure*, Upjohn Institute, 2014

Duranton, Morrow & Turner, 2014

More highways = Heavier, but less valuable exports

A 10% increase in a city's stock of highways causes about a 5% increase in the weight of exports, but does not cause a measurable change in the value of exports. . . . a 10% increase in within city highways . . . cause about a 5% decrease in the unit value of the city's exports.

. . . city highways do not increase the value of exports . . . changes in trade caused by city highways probably do not have large welfare effects. . . . this suggests planners should not give much consideration to trade effects when planning a city's highway network

Duranton, Morrow & Turner, “Roads & Trade: Evidence from the US,”
Review of Economic Statistics, 2014

18-wheel welfare Cadillac

CBO:

**Truck subsidies =
\$57 and \$128
billion annually
social costs, over
what trucks pay
in taxes,**

**Subsidy = 21 to 46
cents per truck
mile.**



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